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EDITORIAL

Antimicrobial resistance: Do we need alternative antibiotics?

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One of the greatest contributions of modern medicine is the development of antibiotics for the treatment of infectious diseases. However, widespread microorganism resistance to antibiotics is a serious public health concern. Antibiotic overuse does, in fact, result in the accumulation of multi-resistance phenotypes in a variety of bacterial strains. These resistant germs can induce infections that are difficult to cure, prolong the course of infection-related illness, and even result in patient death. Healthcare organizations may incur increased costs as a result of these resistance phenomena. Forty-eight new antibiotics have entered the development stages from Phase I to Phase III since 2017.[1] Although the initial reaction to this news was positive, further research revealed a more somber outlook, only 20–30% of these new antibiotics will be product and sold.[2,3] Foremost, the majority of these antibiotics are modifications of already existing antibiotic classes rather than having a brand-new mechanism of action.[1] Furthermore, just 38% of the antibiotics now under development are anticipated to be functional.[4]

Antibiotic therapy is still the preventative and curative method of choice for treating infections, nonetheless. Furthermore, the extensive use of antibiotics in contemporary medicine encourages the growth and spread of microorganisms that are resistant to the drugs, which increases the risk of nosocomial infections.[5] In order to stop the creation of the resistance phenomenon, it is critical to develop novel antibiotics that are not conventional antibiotics. As a result, the WHO even suggests that there may be a "post antibiotic era" where some illnesses may arise (http://www.who.int/fr).

Since it necessitates longer hospital stays and more costly, comprehensive treatment, antimicrobial resistance has a considerable financial influence on national economies and health systems because it decreases patient or caregiver productivity.

The number of people whose treatment is failing or who pass away from illnesses will rise in the absence of efficient methods for the prevention and sufficient treatment of drug-resistant diseases, as well as enhanced access to current and novel antimicrobials with high levels of quality assurance. Organ transplants, cancer chemotherapy and surgery, including caesarean sections or hip replacements will all become riskier medical procedures.

The lifestyle issue linked to rising medical wealth in recently industrialized nations. Due to these circumstances, in-depth study must be done on antibiotic resistance, its problems, and ways to prevent them. The number of studies being done on issues relating to antibiotic resistance has increased. Even outstanding papers, however, are not always accepted for publication due to space restrictions, and valuable communications sometimes take too long to be published. Another reason for the delay is the intense competition between studies with a clinical and basic research focus. We founded the Open Journal of Biomedical Research as a result of these factors. We plan to publish the findings of original studies on microbiology, cell biology, and all other relevant biomedical areas.

Regular papers, review articles, and fast communications if deemed important will all be published in the Open Journal of Biomedical Research.

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We therefore extend an invitation to all members of the diverse biomedical research community to submit their research findings to this journal and join the team tackling the biomedical area in the upcoming season.

Finally, I hope that this collection of papers will be useful, timely, and fascinating to readers. I sincerely thank all of the reviewers for their insightful criticism and suggestions on the articles that were submitted. I also want to express my gratitude to the editing staff for their crucial assistance during all the process.

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